

### **REMARKS**

Claims 1-18 are now pending in the application. Claims 17 and 18 are new. Each of Claims 1-16 has been amended for minor informalities. In this regard, the amendments are not narrowing amendments and the amended claims are of equivalent scope to those as originally filed.

Independent Claim 1 has been further amended to recite that the parison or container defines at least one wall and that the polyester resin has a natural stretch ratio of less than 10. Newly introduced independent Claim 17 recites that the parison or container defines at least one wall and that the polyester resin has a natural stretch ratio (NSR) of less than 9.6. Finally, newly introduced independent Claim 18 recites a biaxially stretched container defining at least one wall and having a fill volume of less than or equal to 1 liter, where the polyester resin is biaxially stretched to a longitudinal stretch ratio ( $SR_L$ ) of less than 4, and/or with a hoop stretch ratio ( $SR_H$ ) less than 3, and/or with a planar stretch ratio (SR) less than 10 to form the container. Support for these amendments is found throughout the specification and claims as originally filed (corresponding to PCT Publication WO 05/063845) and in particular at page 2, lines 2-3 and 6-8; page 3, lines 7-11; page 6, line 21 and 25-26; page 8, lines 15-21; page 17, lines 11-12; page 25, lines 20-21 and 32-33; page 27, lines 24-25; page 36, lines 28-29, and Figures 1-4, by way of non-limiting example.

The Examiner is respectfully requested to reconsider and withdraw the rejections in view of the amendments and remarks contained herein.

### **REJECTION UNDER 35 U.S.C. § 112**

Claims 1-16 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point and distinctly claim the subject matter which Applicant regards as the invention. This rejection is respectfully traversed.

Claim 1 has been amended to recite that a phosphorus content is 10 to 200 ppm (based on the weight of the polyester resin). As such, Applicants respectfully submit that the rejection is now moot and that the indefiniteness rejection under 35 U.S.C. §112, second paragraph, should be withdrawn.

### **REJECTIONS UNDER 35 U.S.C. § 103**

Claims 1-3, 5, 7, and 12 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Fagerburg et al. (U.S. Pat. No. 4,499,262) (hereafter "*Fagerburg*") in view of Banach et al. (U.S. Pat. No. 5,902,873) (hereafter "*Banach*"). This rejection is respectfully traversed.

Claims 4 and 15 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over *Fagerburg* in view of *Banach* and further in view of Abe et al. (Japanese Pat. No. 03146710) (hereafter "*Abe*"). This rejection is respectfully traversed.

Claim 6 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over the combination of *Fagerburg* in view of *Banach* and further in view of Amano et al. (U.S. Pat No. 6,096,683) (hereafter "*Amano*"). This rejection is respectfully traversed.

Claim 8 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over the combination of *Fagerburg* in view of *Banach* and further in view of Schmidt et al. (U.S. Pub. No. 2002/0177686) (hereafter "*Schmidt*").

Claim 9 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over *Fagerburg*, in view of *Banach* and further in view of Po' et al. (U.S. Pat. No. 5,252,282). This rejection is respectfully traversed.

Claim 10 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over *Fagerburg*, in view of *Banach* and further in view of PET Packaging Technology (hereafter PPT). This rejection is respectfully traversed.

Claim 11 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over *Fagerburg*, in view of *Banach* and further in view of Fedderson (U.S. Pat. No. 5,047,271)(hereafter "*Fedderson*").<sup>1</sup> This rejection is respectfully traversed.

Claim 13 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over *Fagerburg*, in view of *Banach* and further in view of PET Packaging Technology. This rejection is respectfully traversed.

Applicants respectfully submit that the scope and content of the cited art does not establish a *prima facie* case of obviousness and in this regard request the Examiner's reconsideration of the claimed invention. The primary reference cited as a basis for the obviousness rejections is *Fagerburg*. *Fagerburg* pertains to various polyester polymer systems, but describes a chemically distinct modifier component, where notably X or Y are not described as being an acyl group (rather only selected from hydroxyalkoxy,



carboxy, or amino) and lacking an group as claimed. As acknowledged by the

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<sup>1</sup> The rejection of claim 11 at Paragraph 8 of the Non-Final Office Action cites the previous combination of *Fagerburg* (US 4,499,262) in view of *Banach* (US 5,902,873) and re-cites *Fagerburg* (US 4,499,262). In the text of the rejection, reference is made to "*Fedderson*," so Applicants assume that the Examiner meant a combination of *Fagerburg* (US 4,499,262) in view of *Banach* (US 5,902,873) in further view of *Fedderson* (US 5,047,271). If this assumption is incorrect, Applicants invite the Examiner to clarify the basis for the §103(a) rejection of Claim 11.

Examiner, *Fagerburg* fails to discuss in any way the addition of  $\text{Na}_2\text{HPO}_4$  to a polyester system. Based on the limitations of *Fagerburg*'s teachings, a skilled artisan would fail to have an apparent reason to modify such distinct polymer systems in the manner necessary to arrive at the claimed invention. Further, a person of ordinary skill in the art would not have any reasonable expectation of success in doing so to achieve the claimed polymer properties.

The *Banach* reference merely describes improved catalyst systems for conventional polyester polymer formation reactions. Specifically, *Banach* describes a catalyst that includes both a titanium or zirconium component (a) and a lanthanide or hafnium series compound (b). It is these specific new catalyst systems that are suggested to improve reactivity during polyester formation reactions. See Col. 1: 47-50 ("[t]he presence of an effective catalyst is critical to the manufacturing process..." Summary of the Invention, Col. 2, lines 41-43).

With regard to the optional inclusion of a "phosphate-forming compound," *Banach* states that "in some reaction systems, the addition of phosphate appears to further increase reactivity. Exemplary classes of such compounds include alkali metal phosphates, alkali metal phosphites, alkali hypophosphites, and alkali metal polyphosphates." Col. 4, lines 25-30, *emphasis added*. *Banach* goes on to discuss various examples of such phosphate forming compounds.

Non-limiting, specific examples include sodium dihydrogen phosphate, trisodium phosphate, disodium hydrogen phosphate, disodium hydrogen phosphite, and sodium dihydrogen phosphite. The alkali metal hypophosphite can be a hypophosphite salt containing any number of alkali metal groups. The alkali metal polyphosphate can be a polyphosphate salt containing one, two, three, four or five alkali metal

groups. Moreover, other alkali metals (e.g., potassium or lithium) could be used in place of sodium for many of these compounds. In some preferred embodiments, sodium dihydrogen phosphate is the preferred phosphate-forming compound.

Col. 4, lines 32-43, emphasis added.

*Banach* merely restates conventional knowledge that in certain systems phosphate based compounds may be included in the catalyst to enhance reactivity. However, *Banach* fails to provide any guidance as to which polymer systems may benefit from such enhanced reactivity by inclusion of such phosphate based compounds. Further, *Banach* describes a wide array of different phosphate compounds (including polyphosphates), without providing any guidance to select certain compounds, while avoiding others.

An invention is not obvious when what would have allegedly been “obvious to try” would require varying all parameters or trying each of numerous possible choices until one possibly arrived at a successful result, particularly where the prior art gave either no indication of which parameters were critical or no direction as to which of many possible choices is likely to be successful. *Bayer Schering Pharma v. Barr Labs.*, 91 USPQ.2d 1569, 1573-74 (Fed. Cir. 2009). Thus, where the options presented by the prior art are not an “easily traversed, small and finite number of alternatives” there is no support for an inference of obviousness, particularly in the unpredictable chemical arts. *Eisai Co. v. Dr. Reddy’s Labs.*, 87 USPQ.2d 1452, 1457 (Fed. Cir. 2008). Here, the *Banach* reference describes a variety of design choices, without providing any guidance with regard to selection of a specific phosphate-forming compound, nonetheless providing guidance to avoid other phosphate-forming compounds from the same group. As such,

*Banach* fails to provide necessary guidance to a person of ordinary skill in the art to arrive at the claimed systems.

Moreover, *Banach* actually teaches away from a claimed polyester resin system that is free of or has less than 9 ppm of sodium dihydrogen phosphate, because *Banach* specifies that sodium dihydrogen phosphate is the preferred phosphate-forming compound to be included in the catalyst. Further, Applicants respectfully disagree with the Examiner's position that it can be assumed that all of the phosphate-containing compounds would be fully oxidized to phosphates, so that no sodium dihydrogen phosphate would remain, since *Banach* fails to describe the extent of oxidation which occurs in system and the degree to which the added phosphate compounds participate in catalysis of the reaction.

The remaining references fail to account for the deficiencies of the combination of the primary and second *Fagerburg* and *Banach* references, and do not establish a *prima facie* of obviousness for any of the dependent claims. The *Abe*, *Amano*, *Schmidt*, *Po'*, *PET Packaging Technology*, and *Fedderson* references, whether considered independently or as combined, fail to describe or suggest forming containers or parisons of polyester resin systems similar to those claimed, which include a modifier and  $\text{Na}_2\text{HPO}_4$  at 10 to 200 ppm, which is further free of  $\text{NaH}_2\text{PO}_4$  or has less than about 9 ppm  $\text{NaH}_2\text{PO}_4$ , which are capable of being formed to have a natural stretch ratio of less than 10. For these same reasons, newly introduced independent Claims 17 and 18 are likewise patentable over the cited art. Applicants respectfully submit that a *prima facie* case of obviousness has not been established by the cited references, either independently or as combined, and that the rejections should be withdrawn.

### **DOUBLE PATENTING**

Claims 1-9 stand rejected under 35 U.S.C. 101 as claiming the same invention as that of Claims 1-9 of prior U.S. Pat. No. 7,473,755. This rejection is respectfully traversed.

Amended independent Claim 1 now recites a parison or rigid container defining at least one wall and comprising the recited polyester resin materials with a natural stretch ratio (NSR) of less than 10. Newly introduced independent Claim 17 recites a similar parison or container defining at least one wall and having an NSR of less than 9.6. Finally, new independent Claim 18 recites a biaxially stretched container defining at least one wall and having a fill volume of less than or equal to 1 liter, where the polyester resin is biaxially stretched to a longitudinal stretch ratio ( $SR_L$ ) of less than 4, and/or with a hoop stretch ratio ( $SR_H$ ) less than 3, and/or with a planar stretch ratio (SR) less than 10 to form the container. The scope of the claims in the present application is distinct from that of Claims 1-9 of U.S. Pat. No. 7,473,755. Per MPEP §804(II)(A), the where the scope of the claims differs, the same invention is not considered to be claimed twice, thus a statutory obviousness rejection under §101 should be withdrawn. Accordingly, withdrawal of this statutory double-patenting rejection is respectfully requested.

## CONCLUSION

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action and the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (248) 641-1600.

Respectfully submitted,

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